

Light Pipe with Directional Side-Light Extraction

Abstract of the Disclosure

5 A light pipe with directional side-light extraction comprises a light pipe and light-extraction structure applied to the light pipe over only a part of the cross-sectional perimeter of the light pipe and over an active section of the length of the light pipe in which directional side lighting is desired. The light-extraction structure comprises any of (i) material, other than a light-carrying portion of the light pipe or any fluoropolymer cladding on the light-carrying portion, including light-scattering material, (ii) surfaces treated to have light-scattering properties, and
10 (iii) material with a reflective property. The foregoing light pipe eliminates the need for using a reflector, as with fluorescent lamps, by extracting the light only in the desired direction, towards a target area to be illuminated. Other embodiments of the invention promote uniformity in side light emission from a light pipe.